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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

REPLY BRIEF FOR THE APPELLANT

Ex parte Akira YAMAMOTO et al.

MOTORIZED ROLLER

Serial No. 10/809,934
Appeal No.: Not Yet Assigned
Group Art Unit: 3726

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Encls: Reply Brief

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Appellant:	Confirmation No. 6428
Akira YAMAMOTO et al.	Appeal No.: (Not Yet Assigned)
Serial Number: 10/809,934	Group Art Unit: 3726
Filed: March 26, 2004	Examiner: Afzali, Sarang

For: MOTORIZED ROLLER

REPLY BRIEF

April 25, 2008

I. INTRODUCTION

This is an appeal from the final rejection set forth in an Official Action dated June 8, 2007, finally rejecting claims 4 and 5, and objecting to claim 6. Claims 1 through 3 are cancelled and claims 7 and 8 have been withdrawn from consideration. A Request for Reconsideration was timely filed on September 10, 2007. An Advisory Action was issued on September 18, 2007, indicating that the request for reconsideration was considered, but did not place the application in condition for allowance. A Notice of Appeal was timely filed on October 5, 2007, with a Petition for Extension of Time. An Appeal Brief was timely filed, but a Notification of Non-Compliant Appeal Brief under 37 C.F.R. §47.37 requested changes to the Appeal Brief. An Amended Appeal Brief addressing the concerns raised in the Notification of Non-Compliant Appeal Brief was timely filed on January 4, 2008. On February 25, 2008, an Examiner's Answer was mailed, which, while it

withdrew at least one ground of rejection, maintained two other grounds for rejection of the claims. This Reply Brief is being provided in supplement to the Appeal Brief, which already sets forth a full and complete basis for reversing the erroneous rejections of the claims. It is hoped that this Reply Brief will serve to highlight some of the errors in the original rejection, and address the new ground of rejection. The rejections of claims 4 and 5 continuing to be erroneous, it is respectfully requested that the rejections be reversed.

II. SUMMARY OF EXAMINER'S ANSWER

At sections 1-8 and 11, the Examiner's Answer favorably indicated the general compliance of the Appeal Brief and did not add any additional information. With respect to item 6, the Examiner's Answer stated that one of the grounds for rejection was being withdrawn. In particular, the Answer stated that the rejection of claim 4 under 35 U.S.C. §102(b) as being allegedly anticipated by U.S. Patent No. 5,088,596 (Agnoff) was withdrawn.

At section 9, the Examiner's Answer largely repeated sections 3 and 5 of the Office Action. At section 10, the Examiner's Answer provided some responses to certain of the arguments set forth in the Appeal Brief.

III. RESPONSE TO SECTION (9)

Appellants respectfully note that the grounds of rejection presented at Section (9) has been partially changed from the grounds of rejection presented in the Office Action.

In particular, in the rejection of Claim 4 under 35 U.S.C. §102(b) as being allegedly anticipated by U.S. Patent No. 4,082,180 (Chung), the Office Action originally identified a first roller body **20** and a second roller body **30**. As noted in the Appeal Brief, this rejection was clearly erroneous because element **20** in Chung corresponds to a belt and, thus, no way anticipated a recited portion of the roller that drives the belt. The rejection, as presented in the Answer, now identifies a first roller body **30** and a second roller body **32**. The Answer further added arguments that the second roller body **32** connects at a peripheral surfaces to the first roller body **30** and, thus, is allegedly connected at one of its "axial ends" as recited in claims.

Because this technical analysis of Chung was newly presented in the Answer, after two Office Actions and an Advisory Action that submitted and identified a belt **20** as the first roller body despite Appellants' arguments that this technical analysis was faulty, Appellants have been denied any opportunity to respond appropriately in prior correspondence and to potentially expedite prosecution and avoid or otherwise streamline the present Appeal. Nevertheless,

this ground of rejection continues to be erroneous, as will be discussed at greater length in Section (IV) of this Reply Brief.

Similarly, in the rejection of Claims 4-5 under 35 U.S.C. §102(b) as being allegedly anticipated by U.S. Patent No. 6,447,336 (Fannin), this ground of rejection continues to be erroneous, as will be discussed at greater length in Section (IV) of this Reply Brief.

IV. RESPONSE TO SECTION (10)

From pages 5-6, the Examiner's Answer contained various responses to arguments, as Section (10) of the Examiner's Answer. The Appeal Brief is capable of standing on its own, and provides a sufficient, unrebutted basis upon which the rejections should be reversed. Nevertheless, for the convenience of the Honorable Board, some additional comments specifically addressing the new technical analysis identified above in Section III and particular points raised in the Answer are provided below.

A. The Rejection of Claim 4 under 35 U.S.C. §102(b) as being allegedly anticipated by U.S. Patent No. 4,082,180 (Chung).

In Section (10), the first paragraph (lines 8-12, of page 5 of the Examiner's Answer) allegedly characterizes Appellants' arguments regarding this rejection. Appellants respectfully decline to accept the characterizations made in the Examiner's Answer of Appellants' arguments as being incomplete and conclusory based upon the new technical analysis to which Appellants have not had any prior opportunity to reply. Appellants' own characterization of Appellants' arguments in the Appeal Brief and modified below in view of the new technical arguments, is more complete than the summary provided in the Examiner's Answer.

As an initial observation, Appellants again note that as used within this field of art and in the present application, the "roller body" refers to an cylindrical

structure used to engage a belt or otherwise apply a rotation force. For example, the present application, for example, at line 12-13 of page 8 defines a roller body **112** as "a substantially circular cylinder member." Furthermore, the present application expressly differentiates a "roller" from the "roller body." In particular, a "roller" is defined to include a "roller body" [defined in ordinary language and within the present application refers to a portion of a cylinder body] and an end portion. Appellants note, for example, that at lines 1-7 of page, FIGS. 2A-2B are described as side views of the "roller" **100**, whereas the "roller body" **112** is defined, *infra,* to be a specific a substantially circular cylinder portion of the roller. Thus, a "roller body," as used in the present application and according to its ordinary meaning of the term, would not include the end portions. *See, for example,* the present application at paragraphs [0007] and [0033]-[0034], where the Appellants deliberately differentiate a roller body **12**, **112** from roller covers **12a-12b**, **112a-112b** at the end of the roller.

Nevertheless, the Answer now identifies element **32**, labeled in Chung as an "end disc" a second roller body. As described in the prior paragraph, this identification is clearly contrary to the accepted meaning of "roller body" as expressly used in within the present application. Furthermore, this suggested interpretation effectively removes the limitation of first and second roller bodies since the Answer now essentially alleged that any two portions of the roller can anticipate the recitations of the first and second roller bodies.

As noted above, the Answer further presented new technical arguments that elements **30** and **32** in Chung allegedly connect at "axial ends," as recited in claim 4, because end cap **32** allegedly connects at a peripheral surface to a non-middle portion of the cylindrical rim **30**. Appellants respectfully note that this statement is technically incorrect and ignores the recitations of claim 4. As depicted in FIG .2 in Chung, elements **30** and **32** do not meet at axial ends. Although no previously presented in the Appeal Brief, the new arguments presented in the Answer now require Appellants to define the term "axial direction" as used in the present application. In particular, axial direction generally refers to a direction of the axis of rotation of the roller, for example, as depicted in FIG. 1 as arrows **IIA**, **IIB**. Thus, elements **30** and **32** of Chung, despite the assertions in the Answer, are not connected at axial ends sections. In particular, elements **30** and **32** of Chung do not satisfy the recitation from claim 4 that "an axial end section of a second roller body side of the first roller body and an axial end section of a first roller body side of the second roller body are connected at a power transmission section between the rotor and the roller body." In contrast, Appellants note that a radial end portion of end disc **32** connects to interior radial surface of the cylindrical rim **30**. Thus, the elements **30** and **32** are positioned in layers, and there is simply no end-to-end connection between supposed roller bodies **30** and **32**, as recited in claim 4. Appellants note, for example, that in FIG. 2 of Chung, the rim **30**, extends well beyond the location of the supposed connection with the end disc **32**. Therefore,

the axial end section of the element **32** does not connect the axial end section of the end plate **30**.

For similar reasons, while it may be argued that rotational force originating from shaft **112** is eventually applied to the rim **30** and the disc **32** (not admitted), the elements **30** and **32** cited in the Office Action are not connected at a "power transmission section between the rotor and the roller body" as recited in claim 4. As used in the present specification, the power transmission section refers to the location at which force from the motor is eventually applied to the roller body via the rotor (Emphasis added).

Regarding this recitation of a "power transmission section," Appellants in the Appeal Brief, in response to the assertion in the Office Action that the conveyer belt **20** and the cylindrical rim **30** corresponded to the recited first and second roller bodies, Appellants noted in the Appeal Brief that, referring to Chung at Figure 2, rotational force from a motor **46** is applied to a gear reducer **40**, and eventually to the cylindrical rim **30** via the end disc **32**. Therefore, the appropriate "power transmission section," from the rotor to the rim **32** loosely corresponds to the intersection of the cylindrical rim **30** and the end disc **32**, if the end disc **32** corresponds to the "rotor" and cylindrical rim **30** is the roller body. In contrast, if the cylindrical rim **30** and the end disc **32** are defined to be portions of the rotor body, as asserted in the Answer, then "power transmission section" where the rotor body receives force from the alleged rotor **112**, would be the inner radial surface end

disc **32** connected to the hub **116**, opposite from the connection intersection of elements **30** and **32**. Thus, Appellants note that even if it could be argued that rim **30** and the disc **32** could be considered "roller bodies" (not admitted) and even if this connection was hypothetically at "axial ends" of elements **30** and **32** (again, not admitted), this connection does not occur at the "power transmission section between the rotor and the roller body."

As an evidence that Chung does not anticipate the configuration recited in claim 4 and the non-trivial differences between these recitations and the configuration disclosed in Chung, Appellants again note that the motorized roller recited in claim 4 provides significant benefits that cannot be achieved through the structure disclosed in Chung. Appellants fully understand that these particular aspects are not recited, but instead have identified certain technical benefits that are achieved through the recited invention that cannot be achieved through the conventional structures, such as disclosed in Chung. For example, as described in the present application at paragraph [0015] and [0046], conventional roller assemblies required high precision processing to accurately transmit the power transmission from the motor to the rotor body. These problems are particularly present when the force applied by the motor increases, for example, to handle heavier packages on a belt driven by the rotor. Chung would not address this problem and would continue to require high precision processing between the cylindrical rim **30**, the shaft **112**, and the end disc **32**.

For at least these reasons, Appellants urge that Chung does not anticipate claim 4, and that this rejection should be withdrawn as being clearly erroneous. Claim 5 should be allowable as depending from allowable claim 4. Moreover, the Office Action does not apply Chung to claim 5. Thus, even if claim 4 remains rejected as anticipated by Chung, claim 5 should be separately allowable over Chung.

B. The rejection of claims 4-5 under 35 U.S.C. §102(b) as being allegedly anticipated by U.S. Patent No. 6,447,336 (Fannin)

In Section (10), the second paragraph (lines 13-17, of page 5 of the Examiner's Answer) allegedly characterizes Appellants' arguments regarding this rejection. Appellants respectfully decline to accept the characterizations of Appellants' arguments as being incomplete. Appellants' own characterization of Appellants' arguments in the Appeal Brief and reiterated below is more complete than the summary provided in the Examiner's Answer.

Contrary to the statements contained in the above-reproduced portion of Section 9 of the Answer, Appellants note that the outer ring **89** identified rotor is not a "rotor." For example, a rotor is defined as "a part that revolves in a stationary part -such as a brake rotor," or "the rotating member of an electrical machine." *See, for example,* http://www.merriam-webster.com/dictionary/rotor. Outer ring **89** satisfies neither of these definitions is it is not "a part that revolves in a stationary

part" since it does not revolve in a stationary part or "the rotating member of an electrical machine" since it is not a part of the electrical machine. In fact, Fannin expressly identifies a rotor **82**, that is a portion of the motor and is distinct from the outer ring **89**. Appellants urge that "rotor" is a well-defined technical term, and that the interpretation used in the Office Action and Answer produce the undesired effect of effectively removing this limitation from claim 4.

Furthermore, the outer ring **89** does not connect to either a gear reducer **84** or a motor **82**, as recited in claim 4. A connection implies a direct contact that is not disclosed in Fannin. This deficiency is not discussed in the Office Action or the answer, except through a conclusory assertion.

Appellants further note that the outer plate **104** is not part of the roller body. As described above in the discussion of Chung and Agnoff, it is well-defined in the present application, in this field of technology, and within the ordinary meaning that a roller body is a cylindrical structure for applying rotational force, and does not include end portions. *See, for example,* the present application at paragraphs [0007] and [0033]-[0034], where the Appellants deliberately differentiate a roller body 12, 112 from roller covers 12a-12b, 112a-112b. In response, the Answer asserted that element **104** "is part of the roller body regardless of what this element is called by the appellant and/or Fannin." Answer at page 6, lines 10-11. The Answer argues that the end plate is not part of the motor, and therefore must be part of the roller body. This analysis simply ignores and fails to respond to the

arguments in the Appeal Brief that the express claim definitions provided in the present application that differentiate the roller from recitation of the "roller body" and that the recitation of a "roller body" excludes the end portions, as expressly defined in the present application.

Furthermore, Appellants note that even if it could be argued that elements **88** and **104** could be considered "roller bodies" (not admitted) and the outer ring 89 could hypothetically be considered a "rotor" that connects to both the gear reducer **84** and the motor **82** (again, not admitted), this connection is not was at "axial ends" of elements **30** and **32.** As depicted in Figure 4 of Fannin, the outer plate **104** is inserted substantially within the outer tube **88**. Consequently, elements **88** and **104**, referenced in the Action, respectively, as the first and second roller bodies, do not meet at axial ends sections thereof as recited in claim 4. Specifically, Fannin also does not teach the limitation that "an axial end section of a second roller body side of the first roller body and an axial end section of a first roller body side of the second roller body are connected." Instead, an outer radial surface of the outer plate **104** contacts an interior radial surface of the outer tube **88**. In response, the Answer asserted that the inner surface of the second roller body **88** contacts an outer peripheral surface of the end cap 89 that, in turn, contacts an inner peripheral surface of the end plate **104**. Appellants note that this discussion conveniently does not address, in anyway, the limitation from claim 4 that "an axial end section of a second roller body side of the first roller body and an axial end section of a first

roller body side of the second roller body are connected." Appellants note, for example, that in FIG. 4 of Fannin, the outer tube **88**, extends well beyond the location of the supposed connection with the end plate **104**. Therefore, the axial end section of the outer tube **88** does not connect the axial end section of the end plate **104**.

Furthermore, this connection of outer tube **88** and end plate **104** does not occur at the "power transmission section between the rotor and the roller body." Instead, the identified "roller" of Fannin, the outer ring **89**, applies radial force to an interior surface of the outer tube 88, whereas the outer tube **88** and the outer plate **104** connect at a separate location, away from the application of force from the supposed rotor 89. Therefore, Fannin does not teach the recitation from claim 4 that the first and second roller bodies, supposedly elements **88** and **104**, connect at a power transmission section between the rotor and the roller body. The recitation is also conveniently not addressed in the Answer.

For at least these reasons, Fannin does not anticipate or suggest claim 4 and that this rejection should be withdrawn. Furthermore, claim 5 should be allowable on similar grounds as depending from allowable claim 4.

Moreover, Fannin also does not recite the limitations of claim 5, which is separately patentable over Fannin. In particular, claim 5 recites that the inner peripheral surfaces of the first roller body and the second roller body are connected to an outer peripheral surface of the rotor. As explained above, the Office Action

identifies the outer tube **88** as the first roller body, the outer plate **104** as the second roller body, and the outer ring **89** as the rotor. Referring to Figure 4 of Fannin, it can be seen that the outer tube **88** connects to an annular surface of the outer plate **89**, and the outer plate **104** connects to a different, axial surface of the outer plate **89**. In this way, elements **88** and **104** do not connect to a single outer peripheral surface of element **89**, which is identified in the Answer as the rotor.

The Answer replies by asserting that peripheral surfaces of elements **88** and **104** connect, respectively to different peripheral surfaces of element **89**. In particular, the Answer argued that the inner surface of the outer shell **88** connects to a first peripheral surface of element **89**, and an inner surface of the end plate **104** connects to a second peripheral surface of element **89**. Appellants note that claim 5 expressly notes that the recited first and second roller bodies connect to "**an** outer peripheral surface of the rotor." (Emphasis added) Thus, claim 5 clearly recites that the first and second roller bodies connect to the same surface of the rotor. This recitation is not disclosed in Fannin in anyway.

Because Fannin does not provide every recitation of claim 5, this rejection is improper and should be also be withdrawn.

As an evidence that Fannin does not anticipate the configuration recited in claims 4 and 5, and that trivial differences between these recitations and the configuration disclosed in Fannin are non-trivial, Appellants again note that the motorized roller recited in claims 4and 5 provides significant benefits that cannot

be achieved through the structure disclosed in Fannin. Appellants fully understand that these particular aspects are not recited, but instead have identified certain technical benefits that are achieved through the recited invention that cannot be achieved through conventional structures, such as that disclosed in Fannin.

V. MANY UNANSWERED ARGUMENTS

The Examiner's Answer left many arguments unanswered. For example, as described above, Appellants note that number recitations, such as a connection of axial end sections of the first and second roller bodies at a power transmission sections, are not disclosed in the cited prior art.

In each case, the arguments that were not answered by the Examiner's Answer should be taken as admitted, and form independent and alternative grounds upon which the rejection should be reversed as clearly improper.

VI. CONCLUSION

For all of the above noted reasons, it is strongly contended that certain clear differences exist between the present invention as claimed in claims 4 and 5 and the cited references relied upon by the Examiner. It is further contended that these differences are more than sufficient that the present invention would have been novel and non-obvious to a person having ordinary skill in the art at the time the invention was made, although in any event, no assertion of obviousness has been presented.

This final rejection being in error, therefore, it is respectfully requested that this honorable Board of Patent Appeals and Interferences reverse the Examiner's decision in this case and indicate the allowability of application claims 4 and 5.

In the event that this paper is not being timely filed, the Appellants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees which may be due with respect to this paper may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

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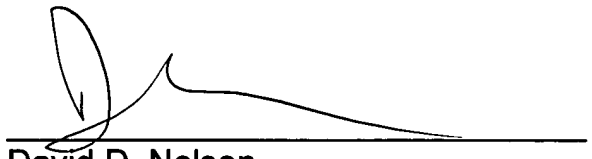

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